



STIC Search Report

EIC 1700

STIC Database Tracking Number: 190302

TO: Satya Sastri
Location: REM 10A30
Art Unit : 1713
May 24, 2006

Case Serial Number: 10/628253

From: Usha Shrestha
Location: EIC 1700
REMSSEN 4B28
Phone: 571/272-3519
usha.shrestha@uspto.gov

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability)
- ☐ Results were not useful in determining patentability or understanding the invention

Comments:

Banks, Kendra

90302

From: SATYA SASTRI [satya.sastri@uspto.gov]
Sent: Wednesday, May 17, 2006 2:37 PM
To: STIC-EIC1700
Subject: Database Search Request, Serial Number: 10/628,253

Requester:
SATYA SASTRI (P/1713)
Art Unit:
GROUP ART UNIT 1713
Employee Number:
79815
Office Location:
REM 10A30
Phone Number:
(571)272-1112
Mailbox Number:

Case serial number:
10/628,253
Class / Subclass(es):

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Ctr.

Earliest Priority Filing Date:
8/1/02

MAY 17 REC'D

Format preferred for results:
Paper

Pat. & T.M. Office

Search Topic Information:

A material comprising, polymers of pentaerythritol acrylate or dipentaerythritol acrylates as given by formulas II and I in claim 1. Please note that structures I and II may have all R's as acrylate or at least one R as acrylate with all in between possibilities.

Special Instructions and Other Comments:



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 Alexandria, Virginia 22313-1450
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Bib Data Sheet

CONFIRMATION NO. 5432

SERIAL NUMBER 10/628,253	FILING OR 371(c) DATE 07/29/2003 RULE	CLASS 524	GROUP ART UNIT 1713	ATTORNEY DOCKET NO. 123034-05004829
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APPLICANTS
 Gi Heon Kim, Daejon-Shi, KOREA, REPUBLIC OF;
 Ji Young Oh, Daejon-Shi, KOREA, REPUBLIC OF;
 Yong Suk Yang, Busan-Shi, KOREA, REPUBLIC OF;
 Jeong Ik Lee, Daejon-Shi, KOREA, REPUBLIC OF;
 Lee Mi Do, Daejon-Shi, KOREA, REPUBLIC OF;
 Tae Hyoung Zyung, Daejon-Shi, KOREA, REPUBLIC OF;

**** CONTINUING DATA *******

**** FOREIGN APPLICATIONS *******
 REPUBLIC OF KOREA 2002-45479 08/01/2002
 REPUBLIC OF KOREA 2003-47638 07/12/2003

IF REQUIRED, FOREIGN FILING LICENSE GRANTED SMALL ENTITY ****
**** 10/29/2003**

Foreign Priority claimed 35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance	STATE OR COUNTRY KOREA, REPUBLIC OF	SHEETS DRAWING 1	TOTAL CLAIMS 12	INDEPENDENT CLAIMS 3
Verified and Acknowledged	Examiner's Signature _____ Initials _____				

ADDRESS
43569

TITLE
Thin film material using pentaerythritol acrylate for encapsulation of organic or polymeric light emitting device, and encapsulation method for LED using the same

FILING FEE RECEIVED 375	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit
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ABSTRACT

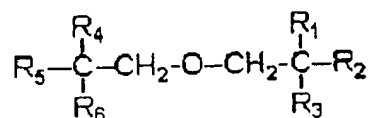
The present invention is directed to a thin film material for encapsulation of organic or polymeric light-emitting electric device having light-emitting
5 layer between cathode and anode, for elongation of lifetime of said device and for providing said device with flexibility, more specifically, to a thin film material for encapsulation of organic or polymeric light-emitting electric device comprising polymer having, as repeating unit of backbone, homo-, 2-component co-, ter-, or tetra-polymer of one to four pentaerythritol acrylate
10 monomer, or physically mixed polymer blend of said polymer and polymers other than poly(pentaerythritol acrylate).

Moreover, the present invention is directed to a method for encapsulation of organic or polymeric light-emitting device using said thin film material consisting of wet and dry process.

15 The light-emitting device encapsulated according to the present invention can be bended and can be used in the manufacturing of large surface area display.

WHAT IS CLAIMED IS:

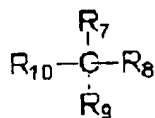
1. A material for thin film encapsulating an organic or polymeric light emitting device, characterized in that said material comprises
- 5 poly(pentaerythrithol acrylate) resulted from the polymerization of pentaerythrithol acrylate monomer represented by the following formula I or II:



(I)

wherein:

- 10 R1, R2, R3, R4, R5, and R6 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$; R1, R2, R3, R4, and R5 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, and R6 is $-\text{CH}_2\text{OH}$; R1, R2, R3, and R4 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$ and R5, and R6 are $-\text{CH}_2\text{OH}$; R1, R2, and R3 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, R4, R5, and R6 are $-\text{CH}_2\text{OH}$; or R1, and R2 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, R3, R4, R5, and R6 are $-\text{CH}_2\text{OH}$:



(II)

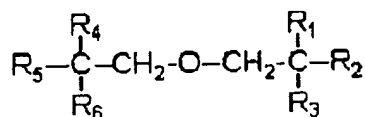
15

wherein:

at least one of R7, R8, R9, and R10 is $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, and the remainings are $-\text{CH}_2\text{OH}$.

2. The material for thin film encapsulating an organic or polymeric light emitting device as claimed in claim 1, characterized in that said poly (pentaerythrithol acrylate) is homo-, 2-component co-, ter- or tetra-polymers consisting of 1 to 4 pentaerythrithol acrylate monomer represented by the following formula I or II.
3. The material for thin film encapsulating an organic or polymeric light emitting device as claimed in claim 1, characterized in that said material is physically mixed polymer blend further comprising polymers other than poly(pentaerythrithol acrylate).
- 10 4. The material for thin film encapsulating an organic or polymeric light emitting device as claimed in one of the claim 1, characterized in that said material further comprises at least one moisture absorbent selected from the group consisting of silica gel, zeolite, magnesium and alkali metal.
5. The material for thin film encapsulating an organic or polymeric light emitting device as claimed in one of the claim 2, characterized in that said material further comprises at least one moisture absorbent selected from the group consisting of silica gel, zeolite, magnesium and alkali metal.
- 15 6. The material for thin film encapsulating an organic or polymeric light emitting device as claimed in one of the claim 3, characterized in that said material further comprises at least one moisture absorbent selected from the group consisting of silica gel, zeolite, magnesium and alkali metal.
- 20 7. A encapsulation method for an organic or polymeric light emitting device, comprising following steps:
- (a) preparing a mixture of one to four pentaerythrithol acrylate monomer

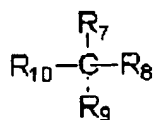
represented by the following formula I or II and polymerization initiator, by mixing:



(I)

5 wherein:

R1, R2, R3, R4, R5, and R6 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$; R1, R2, R3, R4, and R5 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, and R6 is $-\text{CH}_2\text{OH}$; R1, R2, R3, and R4 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$ and R5, and R6 are $-\text{CH}_2\text{OH}$; R1, R2, and R3 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, R4, R5, and R6 are $-\text{CH}_2\text{OH}$; or R1, and R2 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, R3, R4, R5, and R6 are $-\text{CH}_2\text{OH}$:



(II)

wherein:

at least one of R7, R8, R9, and R10 is $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, and the
15 remainings are $-\text{CH}_2\text{OH}$;

(b) coating said mixture on the surface of the organic or polymeric light emitting device by spin coating process, bar coating process, spreading process or simple immersion process; and,

(c) polymerizing said monomer.

20 8. The encapsulation method for an organic or polymeric light emitting

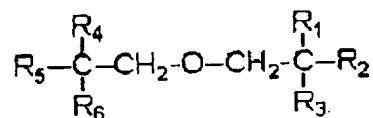
device as claimed in claim 7, characterized in that said mixture further comprises polymers other than poly(pentaerythrithol acrylate).

9. The encapsulation method for an organic or polymeric light emitting device as claimed in claim 5, characterized in that said mixture further comprises at least one moisture absorbent selected from the group consisting of silica gel, zeolite, magnesium and alkali metal.

10. The encapsulation method for an organic or polymeric light emitting device as claimed in claim 6, characterized in that said mixture further comprises at least one moisture absorbent selected from the group consisting of silica gel, zeolite, magnesium and alkali metal.

11. A encapsulation method for an organic or polymeric light emitting device, comprising the steps:

(a) preparing a mixture of one to four pentaerythrithol acrylate monomer represented by the following formula I or II and polymerization initiator, by mixing:

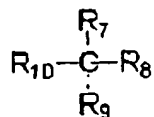


(I)

wherein:

R1, R2, R3, R4, R5, and R6 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$; R1, R2, R3, R4, and R5 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$, and R6 is $-\text{CH}_2\text{OH}$; R1, R2, R3, and R4 are $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}-\text{CH}_2$ and R5, and R6 are $-\text{CH}_2\text{OH}$; R1, R2, and R3 are

$-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}-\text{CH}_2$, R4, R5, and R6 are $-\text{CH}_2\text{OH}$; or R1, and R2 are
 $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}-\text{CH}_2$, R3, R4, R5, and R6 are $-\text{CH}_2\text{OH}$:



(II)

wherein:

- 5 at least one of R7, R8, R9, and R10 is $-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}-\text{CH}_2$, and the remainings are $-\text{CH}_2\text{OH}$;

(b) coating said mixture on the surface of the organic or polymeric light emitting device by physical vapor deposition method or chemical vapor deposition method; and,

- 10 (c) polymerizing said monomer.

12. The encapsulation method for an organic or polymeric light emitting device as claimed in claim 11, characterized in that said mixture further comprises polymers other than poly(pentaerythritol acrylate).

=> fil reg

FILE 'REGISTRY' ENTERED AT 08:43:07 ON 24 MAY 2006

=> d his ful

FILE 'HCAPLUS' ENTERED AT 07:49:27 ON 24 MAY 2006

L1 1 SEA ABB=ON PLU=ON US20040024105/PN.

FILE 'REGISTRY' ENTERED AT 07:49:48 ON 24 MAY 2006

L2 2 SEA ABB=ON PLU=ON (374750-37-5/BI OR 92625-64-4/BI)
E PENTAERYTHRITHOL ACRYLATE/CN

L3 2 SEA ABB=ON PLU=ON (PENTAERYTHRITHIOL/CN OR PENTAERYTH
RITOL/CN)

L4 STR

L5 STR

L6 SCR 2043

L7 50 SEA SSS SAM L4 AND L5 AND L6

L8 11400 SEA SSS FUL L4 AND L5 AND L6

L9 1 SEA ABB=ON PLU=ON L8 AND L2

L10 1523 SEA ABB=ON PLU=ON L8 AND 2/NC
SAV L8 SAS253/A

FILE 'HCAPLUS' ENTERED AT 08:01:44 ON 24 MAY 2006

L11 2227 SEA ABB=ON PLU=ON L10

L12 387 SEA ABB=ON PLU=ON L11(L)DEV/RL

L13 91 SEA ABB=ON PLU=ON L12 AND OPTIC?/SC

L14 1 SEA ABB=ON PLU=ON L13 AND L1

L15 591468 SEA ABB=ON PLU=ON LUM!N? OR ORGANOLUM!N? OR (ELECTRO
OR ORGANO OR ORG#) (2A) LUM!N? OR LIGHT? (2A) (EMIT? OR
EMISSION?) OR EL OR E(W)L OR L(W)E(W)D OR OLED OR LED

L16 5 SEA ABB=ON PLU=ON L13 AND L15

L17 1 SEA ABB=ON PLU=ON L13 AND POTTING(2A) COMPOSITION?

L18 77 SEA ABB=ON PLU=ON L13 AND (?FILM? OR ?LAYER? OR
COVER? OR ENVELOP? OR ENCAS? OR ENWRAP? OR OVERSPREAD?
OR ENCAPS?)

L19 8 SEA ABB=ON PLU=ON L18 AND PROC/RL

L20 11 SEA ABB=ON PLU=ON L14 OR L16 OR L17 OR L19

L21 10 SEA ABB=ON PLU=ON L20 AND P/DT

L22 10 SEA ABB=ON PLU=ON L21 AND (1907-2002)/PRY,AY

L23 1 SEA ABB=ON PLU=ON L20 NOT L21

L24 0 SEA ABB=ON PLU=ON L23 NOT (2003-2006)/PY

L25 10 SEA ABB=ON PLU=ON L22 OR L24

L26 69 SEA ABB=ON PLU=ON L18 NOT L25

L27 7 SEA ABB=ON PLU=ON L26 AND COMPOSITION?

L28 7 SEA ABB=ON PLU=ON L27 AND P/DT

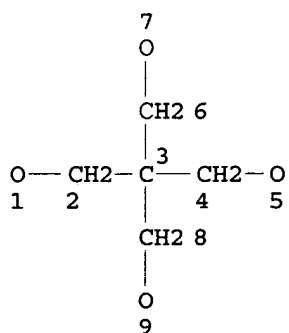
L29 5 SEA ABB=ON PLU=ON L28 AND (1907-2002)/PRY,AY

L30 15 SEA ABB=ON PLU=ON L25 OR L29

=> d que 130

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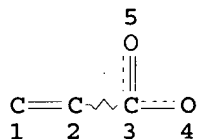
L4 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
 L5 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L6 SCR 2043
 L8 11400 SEA FILE=REGISTRY SSS FUL L4 AND L5 AND L6
 L10 1523 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND 2/NC
 L11 2227 SEA FILE=HCAPLUS ABB=ON PLU=ON L10
 L12 387 SEA FILE=HCAPLUS ABB=ON PLU=ON L11(L)DEV/RL
 L13 91 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 AND OPTIC?/SC
 L14 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND L1
 L15 591468 SEA FILE=HCAPLUS ABB=ON PLU=ON LUM!N? OR ORGANOLUM!N?
 OR (ELECTRO OR ORGANO OR ORG#) (2A)LUM!N? OR LIGHT?(2A)
 (EMIT? OR EMISSION?) OR EL OR E(W)L OR L(W)E(W)D OR
 OLED OR LED
 L16 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND L15
 L17 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND POTTING(2A)COM
 POSITION?
 L18 77 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND (?FILM? OR
 ?LAYER? OR COVER? OR ENVELOP? OR ENCAS? OR ENWRAP? OR
 OVERSPREAD? OR ENCAPS?)
 L19 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND PROC/RL
 L20 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 OR L16 OR L17 OR

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L19
L21      10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND P/DT
L22      10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND (1907-2002)/PR
        Y,AY
L23      1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 NOT L21
L24      0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 NOT (2003-2006)/PY

L25      10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 OR L24
L26      69 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 NOT L25
L27      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND COMPOSITION?
L28      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 AND P/DT
L29      5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 AND (1907-2002)/PR
        Y,AY
L30      15 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 OR L29

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=> fil hcap

FILE 'HCAPLUS' ENTERED AT 08:43:22 ON 24 MAY 2006

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FILE COVERS 1907 - 24 May 2006 VOL 144 ISS 22

FILE LAST UPDATED: 23 May 2006 (20060523/ED)

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=> d l30 1-15 ibib abs hitstr hitind

L30 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:509038 HCAPLUS

DOCUMENT NUMBER: 141:79098

TITLE: Organic electroluminescent device and
encapsulation method

INVENTOR(S): McCormick, Fred B.; Ottman, Jon E.; Padiyath,
Raghunath

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2004119403	A1	20040624	US 2002-324585	2002 1219
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US 6975067	B2	20051213		
WO 2004061992	A1	20040722	WO 2003-US32378	
				2003
				1010

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W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
    CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
    FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
    KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
    MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
    RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ,
    UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
    AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
    DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,
    PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
    GQ, GW, ML, MR, NE, SN, TD, TG
AU 2003277364      A1      20040729      AU 2003-277364

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EP 1579517 A1 20050928 EP 2003-814603 <--

2003
1010

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,
 EE, HU, SK

CN 1726607 A 20060125 CN 2003-80106425

2003
 1010

JP 2006511916 T2 20060406 JP 2004-564784 <--

2003

1010

<--

US 2005247400	A1	20051110	US 2005-179401
			2005 0712

PRIORITY APPLN. INFO.:	US 2002-324585	A	2002 1219
	WO 2003-US32378	W	2003 1010

AB Organic electroluminescent devices are described which comprise a first electrode; a second electrode; a **light-emitting** structure disposed between the first and second electrodes; a conductive **layer** disposed over at least a portion of the second electrode; and a nonconductive material defining an opening through which the conductive **layer** is in elec. communication with the second electrode. Methods of

preparing an organic electroluminescent device are discussed which entail forming an electroluminescent structure comprising a first electrode, a second electrode, and a **light-emitting** structure, where the **light-emitting** structure is disposed between the first and second electrodes; forming an opening in a nonconductive material; aligning the opening in the nonconductive material with a surface of the second electrode; and establishing an elec. communication between a conductive **layer** and the second electrode through the opening in the nonconductive material.

IT 710307-34-9

(organic electroluminescent device and **encapsulation** method)

RN 710307-34-9 HCAPLUS

CN 2-Propenoic acid, 2-[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with Ebecryl 629 (9CI) (CA INDEX NAME)

CM 1

CRN 121448-64-4

CMF Unspecified

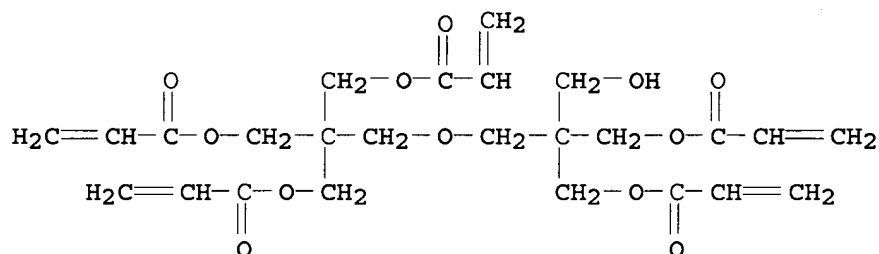
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 60506-81-2

CMF C25 H32 O12



IC ICM H01J001-62

ICS H01J063-04

INCL 313506000; 313512000

CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38, 76

ST org electroluminescent device **encapsulation**

IT Alkali metals, uses

Alkaline earth metals

(electrode; organic electroluminescent device and **encapsulation** method)

IT Drying agents

(**encapsulating** material containing; organic electroluminescent device and **encapsulation** method)

IT Adhesives

(**encapsulating** material; organic electroluminescent

device and **encapsulation** method)

IT Polymers, uses
(**encapsulating** material; organic electroluminescent device and **encapsulation** method)

IT Electroluminescent devices
Electronic packages
Electronic packaging process
Semiconductor device fabrication
(organic electroluminescent device and **encapsulation** method)

IT Polyesters, uses
(organic electroluminescent device and **encapsulation** method)

IT Carbides
Nitrides
Oxides (inorganic), uses
Oxynitrides
(substrate; organic electroluminescent device and **encapsulation** method)

IT 155090-83-8, Baytron P 4083
(buffer **layer**; organic electroluminescent device and **encapsulation** method)

IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato) 122648-99-1,
9,10-Bis(2-naphthyl)anthracene
(electron-transporting **layer**; organic electroluminescent device and **encapsulation** method)

IT 7440-50-8, Copper, uses 277754-19-5, Thermobond 845
277754-21-9, Thermobond 845EG
(**encapsulating** material; organic electroluminescent device and **encapsulation** method)

IT 200052-70-6, DCJTB
(fluorescent dopant; organic electroluminescent device and **encapsulation** method)

IT 123847-85-8, NPD
(hole-transporting **layer**; organic electroluminescent device and **encapsulation** method)

IT 26009-24-5, Covion PDY132
(**light-emitting layer**; organic electroluminescent device and **encapsulation** method)

IT 7440-21-3, Silicon, uses
(n-doped electrode; organic electroluminescent device and **encapsulation** method)

IT 7429-90-5, Aluminum, uses 7440-22-4, Silver, uses 7440-70-2,
Calcium, uses 7789-24-4, Lithium fluoride, uses 25038-59-9,
PET, uses 50926-11-9, Indium tin oxide 710307-34-9
(organic electroluminescent device and **encapsulation** method)

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L30 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:370732 HCAPLUS

DOCUMENT NUMBER: 140:397189

TITLE: Material composition for producing
optical-waveguide and method for producing
optical waveguide

INVENTOR(S): Inui, Yukitoshi; Kondo, Kuniyoshi; Yamashita,
Tatsuya; Kawasaki, Akari; Kagami, Manabu; Ito,
Hiroshi; Sato, Shin; Kato, Hisao

PATENT ASSIGNEE(S): Toyoda Gosei Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 29 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1416301	A1	20040506	EP 2003-24527	2003 1027

<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,
 EE, HU, SK

JP 2004151160	A2	20040527	JP 2002-313421	2002 1028
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JP 2004149579	A2	20040527	JP 2002-313422	2002 1028
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US 2004131320	A1	20040708	US 2003-693605	2003 1027
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PRIORITY APPLN. INFO.:		JP 2002-313421	A	2002 1028
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		JP 2002-313422	A	2002 1028
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AB A method of fabricating an optical waveguide is described entailing preparing an optical member for use in optical transmission and emitting leakage light to its surroundings; and curing a photo-curable resin having a lower refractive index after curing than a refractive index of an outer circumference of the optical member by using the leakage light to thereby deposit the cured photo-curable resin on a surface of the optical member wherein the cured photo-curable resin is formed by curing a mixture solution of a first photo-curable resin of a low refractive index and a second photo-curable resin of a high refractive index different in curing mechanism; the leakage light is capable of curing the first photo-curable resin but incapable of curing the second photo-curable resin; the method entails curing both the first photo-curable resin and the second photo-curable resin after curing the first photo-curable resin by using the leakage light; and the refractive index of at least one portion of the cured photo-curable resin decreases monotonously as the position of the cured photo-curable resin goes farther from the surface of the optical member. A material composition for producing an optical waveguide, is described comprising a radical polymerizable material; a cationic polymerizable material; a radical polymerization initiator for initiating polymerization of the radical

polymerizable material by light irradiation; and a cationic polymerization initiator for initiating polymerization of the cationic polymerizable material by light irradiation; wherein light irradiation at a specific wavelength is effective in activating the radical polymerization initiator but ineffective in activating the cationic polymerization initiator, and a refractive index of the cured radical polymerizable material is lower than a refractive index of the cured cationic polymerizable material.

IT 686773-19-3P

(polymer material composition for producing optical-waveguide and method for producing optical waveguide)

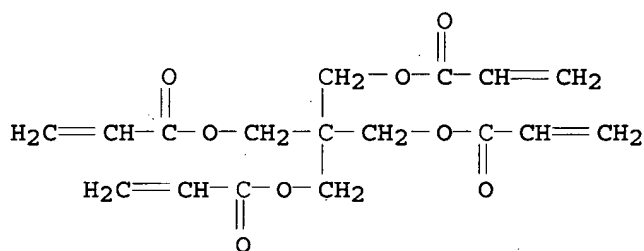
RN 686773-19-3 HCAPLUS

CN 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4

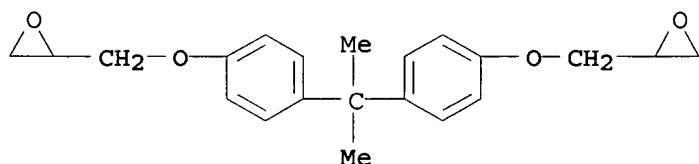
CMF C17 H20 O8



CM 2

CRN 1675-54-3

CMF C21 H24 O4



IC ICM G02B001-04

ICS G02B006-12; C08J003-24; C08F002-50

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38

IT 61041-95-0P 64787-95-7P 686773-16-0P 686773-17-1P

686773-18-2P 686773-19-3P 686773-20-6P 686773-21-7P

686773-22-8P 686773-23-9DP, alicyclic

(polymer material composition for producing optical-waveguide and method for producing optical waveguide)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L30 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2004:312269 HCAPLUS
 DOCUMENT NUMBER: 140:347196
 TITLE: Antireflection **films** with hard coat **layers** and their production and curable **compositions** for producing them and polarizing plates and display devices using them
 INVENTOR(S): Obayashi, Tatsuhiko; Ishizuka, Takahiro; Ibuki, Shuntaro; Muramatsu, Yuuzou
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: U.S. Pat. Appl. Publ., 55 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: **Patent**
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 2004070041	A1	20040415	US 2003-612022	2003 0703
JP 2004170901	A2	20040617	<-- JP 2003-271447	2003 0707
PRIORITY APPLN. INFO.:			<-- JP 2002-197958	A 2002 0705
			<-- JP 2002-211815	A 2002 0719
			<-- JP 2002-320326	A 2002 1101
			<--	

OTHER SOURCE(S): MARPAT 140:347196
 AB Antireflective **films** comprising at least a hard coat **layer** and a low-refractive-index **layer** containing a binder polymer on a transparent support are described in which the hard coat **layer** and/or the low-refractive-index **layer** contains a hydrolyzate of an organosilane in which a hydroxyl group or a hydrolysable group is directly bonded to silicon, and/or a partial condensation product thereof; and ≥ 1 metal chelate compound of ROH (R = C1-10 alkyl) and R4COCH2COR5 (R4 = C1-10 alkyl; R5 = C1-10 alkyl or alkoxy) as ligands and a metal selected from Zr, Ti, and Al as the central metal. The hard coat **layer** may contain an inorg. filler composed of an oxide of ≥ 1 of Zr, Ti, Al, In, Zn, Sn, Sb, and Si. Methods of producing an antireflection **films** are described which entail coating a hard coat **layer** and a low-refractive-index **layer** containing a binder polymer, on a transparent support, wherein a coating solution of the hard coat

layer and/or a coating solution of the low-refractive-index layer comprises: the hydrolyzate of the organosilane and/or the partial condensation product; the metal chelate compound; and a β -diketone compound and/or a β -ketoester compound represented by formula R4OCOR5. Curable compns. suitable for producing the films are described. Display devices utilizing the antireflective films and/or the polarizing plates are also described.

IT 82277-45-0P, Dipentaerythritol hexaacrylate-dipentaerythritol pentaacrylate copolymer (antireflection films with hard coat layers and their production and curable compns. for producing them and polarizing plates and display devices using them)

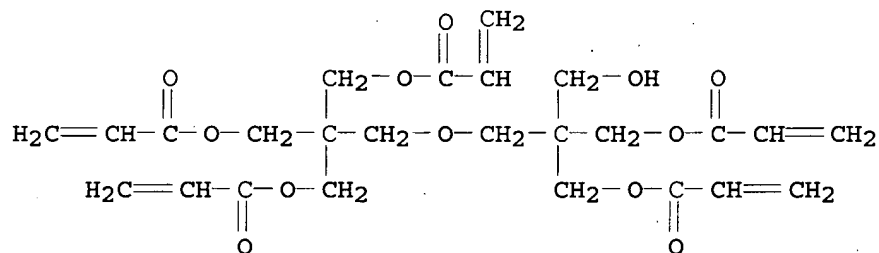
RN 82277-45-0 HCAPLUS

CN 2-Propenoic acid, 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 60506-81-2

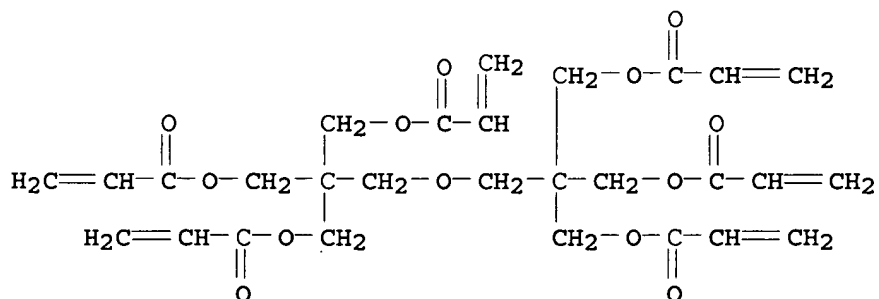
CMF C25 H32 O12



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM H01L031-0232

INCL 257437000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and
Other Related Properties)

Section cross-reference(s): 42, 74

ST antireflection **film** hard coat **layer** prodn;
polarizing plate antireflection **film** hard coat; display
device polarizing plate antireflection **film** hard coatIT Antireflective **films**

Coating materials

Coating process

Optical imaging devices

Polarizers

(antireflection **films** with hard coat **layers**
and their production and curable **compns.** for producing
them and polarizing plates and display devices using them)

IT Fluoropolymers, uses

Polysiloxanes, uses

(antireflection **films** with hard coat **layers**
and their production and curable **compns.** for producing
them and polarizing plates and display devices using them)

IT Fluoropolymers, uses

(di-Me siloxane-, Opstar JN 7228; antireflection **films**
with hard coat **layers** and their production and curable
compns. for producing them and polarizing plates and
display devices using them)

IT Polysiloxanes, uses

(di-Me, fluorine-containing, Opstar JN 7228; antireflection
films with hard coat **layers** and their production
and curable **compns.** for producing them and polarizing
plates and display devices using them)IT 1312-43-2, Indium oxide 1314-13-2, Zinc oxide, uses 1314-23-4,
Zirconium oxide, uses 1327-33-9, Antimony oxide 1332-29-2, Tin
oxide 1344-28-1, Aluminum oxide, uses 7440-32-6D, Titanium,
compds. 7440-67-7D, Zirconium, compds. 7631-86-9, Silicon
oxide, uses 13463-67-7, Titanium oxide, uses 14782-75-3,
Diisopropoxyaluminum ethyl acetoacetate 365440-38-6, DeSolute
Z7526 407630-06-2, DeSolute Z7401(antireflection **films** with hard coat **layers**
and their production and curable **compns.** for producing
them and polarizing plates and display devices using them)IT 9003-53-6, Polystyrene 9011-14-7, Polymethyl methacrylate
141551-31-7, Dipentaerythritol hexaacrylate-dipentaerythritol
pentaacrylate-trimethylolpropane triacrylate copolymer
192120-80-2, X-22-169AS(antireflection **films** with hard coat **layers**
and their production and curable **compns.** for producing
them and polarizing plates and display devices using them)

IT 355023-96-0P

(antireflection **films** with hard coat **layers**
and their production and curable **compns.** for producing
them and polarizing plates and display devices using them)IT 814-68-6DP, Acrylic acid chloride, reaction products with
fluoroolefin polymers 2530-83-8DP, 3-
Glycidoxypropyltrimethoxysilane, compds. and hydrolyzates
2530-85-0DP, 3-Methacryloyloxypropyltrimethoxysilane, compds. and
hydrolyzates 4369-14-6DP, 3-Acryloyloxypropyltrimethoxysilane,
compds. and hydrolyzates 82277-45-0P, Dipentaerythritol
hexaacrylate-dipentaerythritol pentaacrylate copolymer
613687-03-9DP, reaction products with acrylic acid chloride
655244-55-6P

(antireflection films with hard coat layers
and their production and curable compns. for producing
them and polarizing plates and display devices using them)

L30 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:100844 HCAPLUS

DOCUMENT NUMBER: 140:171928

TITLE: Thin film material using
pentaerythritol acrylate for
encapsulation of organic or polymeric
light emitting device, and
encapsulation method for LED
using the same

INVENTOR(S): Kim, Gi Heon; Oh, Ji Young; Yang, Yong Suk;
Lee, Jeong Ik; Do, Lee Mi; Zyung, Tae Hyoung

PATENT ASSIGNEE(S): S. Korea

SOURCE: U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004024105	A1	20040205	US 2003-628253	2003 0729
PRIORITY APPLN. INFO.:				<--
				KR 2002-45479 A
				2002 0801
				<--
				KR 2003-47638 A
				2003 0712

OTHER SOURCE(S): MARPAT 140:171928

AB Materials for thin-film encapsulation of organic
or polymeric light-emitting devices are
described which comprise poly(pentaerythritol acrylate) produced
by polymerization of pentaerythritol acrylate monomers. The materials
may addnl. comprise polymers other than poly(pentaerythritol
acrylate). Encapsulation methods for organic or polymeric
light-emitting devices are described which
entail preparing a mixture of pentaerythritol acrylate monomers and a
polymerization initiator, coating the surface of an organic or polymeric
light-emitting device with the mixture using a
spin coating process, bar coating process, spreading process, or
simple immersion process; and polymerizing the monomer.

IT 92625-64-4, Pentaerythritol acrylate homopolymer
(pentaerythritol acrylate polymers for encapsulation
of organic or polymeric light-emitting devices
and methods for encapsulating devices using them)

RN 92625-64-4 HCAPLUS

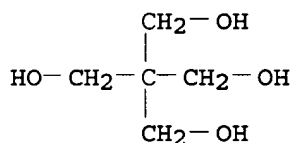
CN 2-Propenoic acid, ester with 2,2-bis(hydroxymethyl)-1,3-
propanediol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 56093-53-9
 CMF C5 H12 O4 . x C3 H4 O2

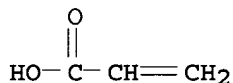
CM 2

CRN 115-77-5
 CMF C5 H12 O4



CM 3

CRN 79-10-7
 CMF C3 H4 O2



- IC ICM C23C016-00
 ICS C08K003-34
 INCL 524492000; 427248100; 524450000
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and
 Other Related Properties)
 Section cross-reference(s): 38, 76
 ST pentaerythritol acrylate polymer light emitting
 device encapsulation
 IT Potting compositions
 (pentaerythritol acrylate polymer-based compns. for
 encapsulation of organic or polymeric light-
 emitting devices)
 IT Electroluminescent devices
 (pentaerythritol acrylate polymers for encapsulation
 of organic or polymeric light-emitting devices
 and methods for encapsulating devices using them)
 IT Potting
 (using pentaerythritol acrylate polymers for
 encapsulation of organic or polymeric light-
 emitting devices)
 IT 92625-64-4, Pentaerythritol acrylate homopolymer
 (pentaerythritol acrylate polymers for encapsulation
 of organic or polymeric light-emitting devices
 and methods for encapsulating devices using them)
 IT 374750-37-5, HSP188
 (polymerization initiator; potting compns. for
 encapsulation of organic or polymeric light-
 emitting devices containing)

L30 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2003:893026 HCAPLUS

DOCUMENT NUMBER: 139:388205
 TITLE: High refraction film, high
 refraction film-forming coating
 composition, anti-reflection film,
 protective film for polarizing
 plate, polarizing plate and image display
 device
 INVENTOR(S): Nakamura, Kenichi; Ootani, Tadayuki
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 269 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003093878	A2	20031113	WO 2003-JP5476	2003 0428
<--				
WO 2003093878	A3	20040923		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004029705	A2	20040129	JP 2002-362873	2002 1213
<--				
JP 2004191873	A2	20040708	JP 2002-362856	2002 1213
<--				
JP 2004249495	A2	20040909	JP 2003-40041	2003 0218
AU 2003231551	A1	20031117	AU 2003-231551	2003 0428
<--				
US 2005175796	A1	20050811	US 2003-511035	2003 0428
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PRIORITY APPLN. INFO.:			JP 2002-129929	A 2002 0501
<--				
			JP 2002-362856	A

2002
1213<--
JP 2002-362873 A2002
1213<--
JP 2003-40041 A2003
0218

WO 2003-JP5476 W

2003
0428

OTHER SOURCE(S): MARPAT 139:388205

AB A high refraction film, an anti-reflection film, a protective film for polarizing plate, a polarizing plate and an image display device excellent in weathering resistance are provided. The high refraction film comprises inorg. fine particles having an average particle diameter of from 1 to 200 nm comprising titanium dioxide as a main component and has a refractive index of from 1.55 to 2.40. The anti-reflection film comprises a transparent support on which at least a high refraction film is formed. The polarizing plate comprises a polarizing film and two protective films having the polarizing film interposed between them, where an anti-reflection film is used as at least one of the two protective films or where an anti-reflection film is used as one protective film and an optically compensated film having optical isomerism is used as another protective sheet. The image display device has a structure comprising an anti-reflection film or a polarizing plate disposed on the image display surface.

IT 82277-45-0
(high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)

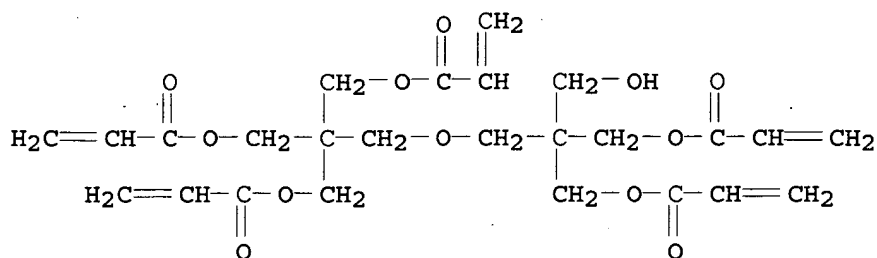
RN 82277-45-0 HCAPLUS

CN 2-Propenoic acid, 2-[[3-hydroxy-2,2-bis[[[1-oxo-2-propenyl)oxy)methyl]propoxy)methyl]-2-[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl ester, polymer with 2-[[3-[[[1-oxo-2-propenyl)oxy]-2,2-bis[[[1-oxo-2-propenyl)oxy)methyl]propoxy)methyl]-2-[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 60506-81-2

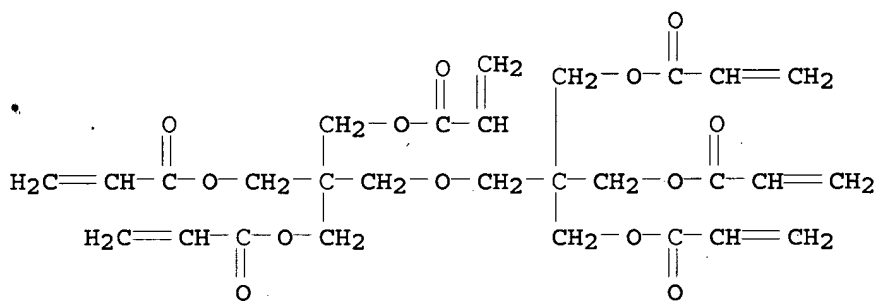
CMF C25 H32 O12



CM 2

CRN 29570-58-9

CMF C28 H34 O13



- IC ICM G02B001-11
ICS G02B005-30; G02F001-133; C09C001-00
- CC 73-2 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 38, 42, 74
- ST refraction film coating antireflection protective polarizing plate display device
- IT Dispersing agents
(anionic; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Transparent materials
(antireflective film support; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Polymers, uses
(co-, layer in antireflection film; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Inorganic compounds
Organic compounds, uses
Organometallic compounds
(coating; high refraction film, high refraction

- film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Fluoropolymers, properties
 - (di-Me siloxane-, Opstar JN7228 crosslinked with silane polymer; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Polysiloxanes, properties
 - (di-Me, fluorine-containing, Opstar JN7228 crosslinked with silane polymer; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Photorefractive materials
 - (films; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Silazanes
 - (heptadecafluorodecyl silsesquiazanes, water-repellent surface active agent; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Antireflective films
 - Dispersing agents
 - Optical imaging devices
 - Polarizing films
 - (high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Fluoropolymers, uses
 - (high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Coating materials
 - (high refraction; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Optical materials
 - (isomeric, discotic; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Binders
 - (organic; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT Liquid crystal displays
 - (polarizing plate for; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 7553-56-2, Iodine, uses

- (adsorbed on polarizing plate; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 7429-90-5D, Aluminum, compds. 7440-48-4D, Cobalt, compds.
7440-67-7D, Zirconium, compds.
(coating; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 623962-01-6
(copolymer in low refractive layer; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 9003-53-6, Polystyrene
(crosslinked particles; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 101483-17-4, Di(tert-butylphenyl iodonium hexafluorophosphate)
(hard coat layer containing; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 13463-67-7, Titanium dioxide, properties 82277-45-0
160716-45-0 623961-69-3 623961-76-2
(high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 7664-93-9, Sulfuric acid, uses 206254-81-1
(high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 365440-38-6, DeSolite Z7526 623961-82-0 623961-90-0
623961-95-5
(high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 12673-86-8, Antimony tin oxide
(particles; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 9002-89-5, Polyvinyl alcohol
(polarizing plate component, adhesive; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 7631-86-9, Silica, properties
(polymer-dispersed particles; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 1314-23-4, Zirconium oxide, properties

- (polymer-dispersed particles; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 1310-73-2, Sodium hydroxide, uses (saponifying solution containing; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 14475-63-9, Zirconium hydroxide 21645-51-2, Aluminum hydroxide, uses (surface treatment using; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 7429-90-5, Aluminum, properties 7440-48-4, Cobalt, properties 7440-67-7, Zirconium, properties (titanium dioxide doped with; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 991-84-4, 2,4-Bis(n-octylthio)-6-(4-hydroxy-3,5-di-tert-butylanilino)-1,3,5-triazine (transparent support prepared using; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 79-20-9, Methyl acetate 108-94-1, Cyclohexanone, uses 115-86-6, Triphenyl phosphate 60893-79-0, Biphenyldiphenyl phosphate (transparent support prepared using; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)
- IT 9012-09-3, Triacetyl cellulose (transparent support; high refraction film, high refraction film-forming coating composition, anti-reflection film, protective film for polarizing plate, polarizing plate and image display device)

L30 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:345203 HCAPLUS

DOCUMENT NUMBER: 136:348080

TITLE: Anti-glare and anti-reflection film and polarizing plate

INVENTOR(S): Obayashi, Tatsuhiko; Sotozono, Hirohisa

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002131507	A2	20020509	JP 2000-324152	2000 1024

JP 2000-324152

2000
1024

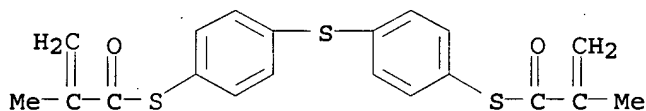
IT 399510-23-7, DPHA-MPSMA copolymer
(anti-glare and anti-reflection film and polarizing
plate)

CN 2-Propenoic acid, 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with S,S'-(thiodi-4,1-phenylene) bis(2-methyl-2-propenethioate) (9CI)
(CA INDEX NAME)

CM 1

CRN 129283-82-5

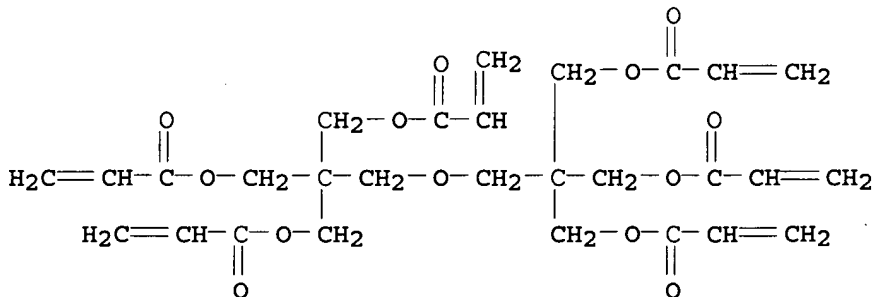
CMF C20 H18 O2 S3



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02B001-11

ICS B32B007-02; B32B027-00; C09K003-00; G02B001-10; G02B005-02;
G02B005-30; G02F001-1335

CC 73-11 (**Optical**, Electron, and Mass Spectroscopy and
Other Related Properties)
Section cross-reference(s): 42

ST antiglare antireflection **film** polarizer polysilane
hydrolyzate

IT Polysilanes
(anti-glare and anti-reflection **film** and polarizing
plate)

IT Polarizing **films**
(anti-glare and anti-reflection of)

IT Antireflective **films**
(polarizing plate containing anti-glare and)

IT 7631-86-9, Silica, uses 29570-58-9, DPHA 220524-99-2
355137-65-4, SX-200H 370884-29-0, JSR KZ-7991
399510-23-7, DPHA-MPSMA copolymer 404575-06-0
418253-06-2
(anti-glare and anti-reflection **film** and polarizing
plate)

IT 71868-10-5, Irgacure 907
(photoinitiator; anti-glare and anti-reflection **film**
and polarizing plate)

IT 82799-44-8, Kayacure DETX
(photosensitizer; anti-glare and anti-reflection **film**
and polarizing plate)

L30 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:927420 HCAPLUS

DOCUMENT NUMBER: 136:77031

TITLE: Red **luminescent** material and
composite

INVENTOR(S): Ikeda, Masaaki; Onishi, Masao; Kiyoyagi,
Noriko

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

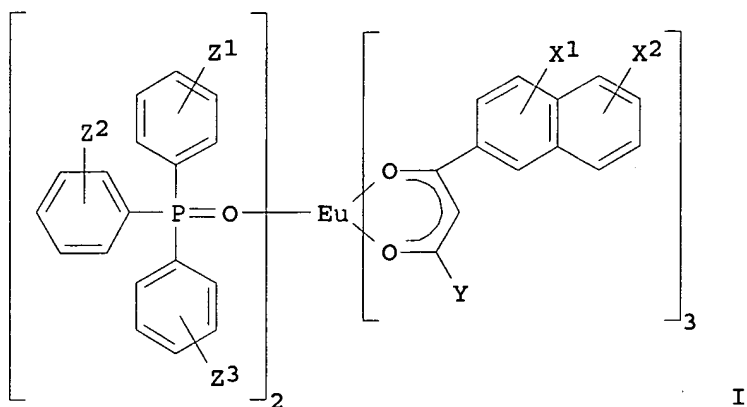
DOCUMENT TYPE: **Patent**

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001354953	A2	20011225	JP 2001-109876	2001 0409
			<--	
PRIORITY APPLN. INFO.:			JP 2000-108573	A 2000 0410
			<--	
OTHER SOURCE(S):	MARPAT 136:77031			
GI				



AB The invention refers to a red **luminescent** material and ink comprising I [X1,2 = H, halo, alkyl, alkoxy, hydroxyl, amino, alkylamino, dialkylamino, aryl or aralkyl; Y = C1-10 fluoro-hydrocarbon; Z1-3 = H, halo, alkyl, alkoxy, amino, alkylamino, dialkylamino, aryl or aralkyl].

IT 383177-72-8

(red **luminescent** material and composite)

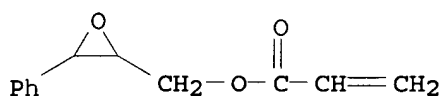
RN 383177-72-8 HCAPLUS

CN 2-Propenoic acid, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (3-phenyloxiranyl)methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 142960-60-9

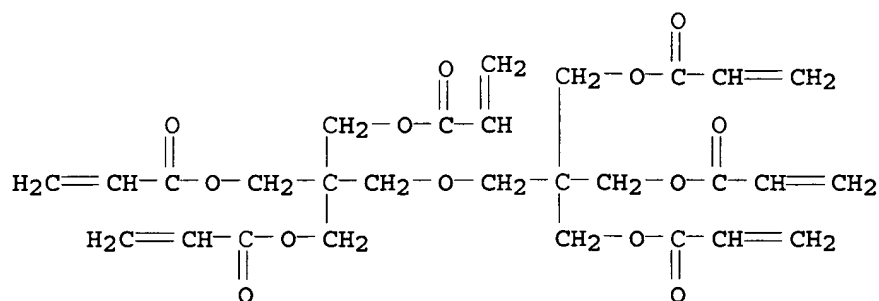
CMF C12 H12 O3



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM C09K011-06
ICS C09D011-00
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST red ink luminescent material
IT Inks
Luminescent substances
(red luminescent material and composite)
IT 540-72-7, Sodium thiocyanate 872-50-4, N-Methyl-2-pyrrolidone, uses 9003-22-9, Vinyl chloride-vinyl acetate copolymer 383177-72-8
(red luminescent material and composite)
IT 383191-23-9P
(red luminescent material and composite)
IT 791-28-6, Triphenylphosphine oxide 893-33-4, 4,4,4-Trifluoro-1-(2-naphthyl)-1,3-butanedione 13759-92-7, Europium chloride hexahydrate
(red luminescent material and composite)

L30 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:864891 HCAPLUS
DOCUMENT NUMBER: 136:12611
TITLE: Electroconductive antireflective materials, their manufacture, and their uses in touch panels
INVENTOR(S): Morimoto, Yoshihiro
PATENT ASSIGNEE(S): Nof Corporation, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001330707	A2	20011130	JP 2000-148505	2000 0519

PRIORITY APPLN. INFO.: JP 2000-148505
2000 0519

AB The materials possess multilayers of high- and low-n

IT 372967-44-7P

RN 372967-44-7 HCAPLUS

CM 1

CRN 125635-55-4

$$\text{H}_2\text{C}=\text{CH}-\overset{\text{O}}{\parallel}\text{C}-\text{O}-\text{CH}_2-(\text{CF}_2)_8-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{CH}=\text{CH}_2$$

CM 2

CRN 4986-89-4

[illegible]

IC ICM G02B001-11

ICS C23C014-08; C23C014-20; G02F001-1335; G02F001-1343

USHA SHRESTHA EIC 1700 REM 4B28

Other Related Properties)
 Section cross-reference(s): 38, 74, 76
 ST electroconductive antireflection sheet touch panel visibility;
 acrylic fluoropolymer antireflective **layer**
 electromagnetic shield; indium tin oxide coated antireflective
 material; electronic display television electromagnetic shield
 contact
 IT Fluoropolymers, properties
 (acrylic, antireflective **layers**; electroconductive
 antireflective materials, their manufacture, and their uses in touch
 panels)
 IT Antireflective **films**
 (sheets, electroconductive; electroconductive antireflective
 materials, their manufacture, and their uses in touch panels)
 IT 7631-86-9, XBA ST, properties
 (antireflective **layers**; electroconductive
 antireflective materials, their manufacture, and their uses in touch
 panels)
 IT 27775-58-2P, Tetramethylolmethane triacrylate homopolymer
 88233-95-8P 194877-44-6P **372967-44-7P**
 (antireflective **layers**; electroconductive
 antireflective materials, their manufacture, and their uses in touch
 panels)
 IT 50926-11-9, Indium tin oxide
 (electroconductive **layers**; electroconductive
 antireflective materials, their manufacture, and their uses in touch
 panels)

L30 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:864890 HCAPLUS

DOCUMENT NUMBER: 136:12610

TITLE: Colorless antireflective materials with high
 hardness and their uses in electronic display
 devices

INVENTOR(S): Nojima, Takayuki; Morimoto, Yoshihiro

PATENT ASSIGNEE(S): Nof Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: **Patent**

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001330706	A2	20011130	JP 2000-147863	2000 0519

PRIORITY APPLN. INFO.: <-- JP 2000-147863

2000
0519

AB The materials, offering improved visibility to electronic
 displays, possess outermost low-n **layers** on transparent
 supports via adhesive **layers** which satisfy difference in
 n between the supports ≤ 0.04 . The adhesive **layers**
 may be prepared from UV-curable **compns.** containing
 multifunctional fluoroacrylates $(H_2C:CX_1CO_2)mY_1(OCOCX_1:CH_2)_n$ [X1,

X2 (X1 ≠ X2) = H, Me; Y1 = ≤4-OH- and 2-24-F-containing C1-14 alkylene, ≥4-F-containing C3-14 cycloalkylene, CY2HCH2 (Y2 = ≥3-F-containing C1-14 alkyl, ≥4-F-containing C3-14 cycloalkyl), or CH2CZ1[CO2CY3HC(OZ2)HY4]CH2 [Y3, Y4 = alternatively H or 3-24-F-containing C1-14 alkyl; Z1 = H, C1-3 alkyl, Z2 = H, (meth)acryloyl]; m, n = 1, 2].

IT 372967-41-4P

(adhesive layers; colorless and hard antireflective materials with good scratch resistance and antireflection effects for displays)

RN 372967-41-4 HCAPLUS

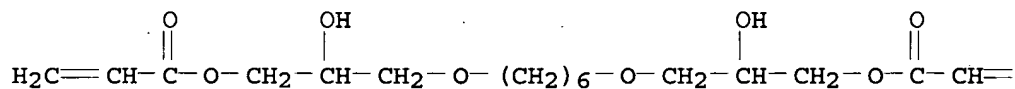
CN 2-Propenoic acid, 1,6-hexanediylbis[oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 83045-03-8

CMF C18 H30 O8

PAGE 1-A



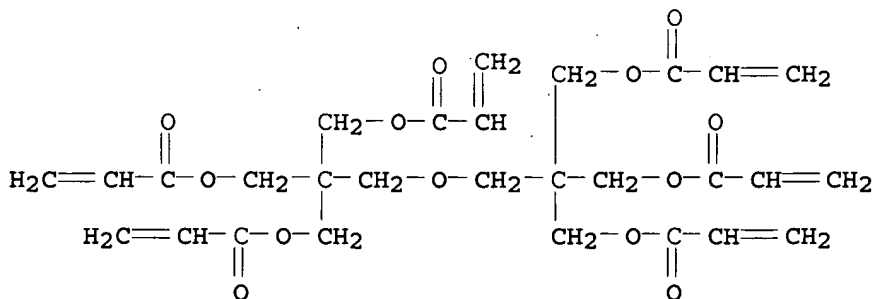
PAGE 1-B

=CH₂

CM 2

CRN 29570-58-9

CMF C28 H34 O13



IT 372967-44-7P

(low-n layers; colorless and hard antireflective

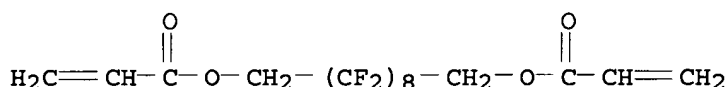
materials with good scratch resistance and antireflection effects for displays)

RN 372967-44-7 HCAPLUS
CN 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-decanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 125635-55-4

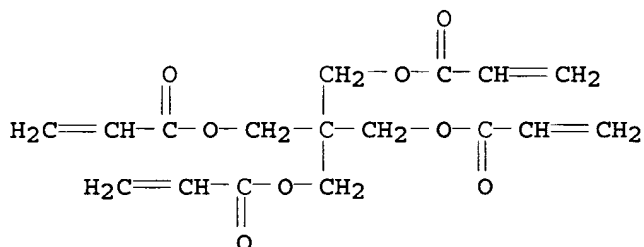
CMF C16 H10 F16 O4



CM 2

CRN 4986-89-4

CMF C17 H20 O8



IC ICM G02B001-11

ICS B32B007-02; B32B027-30; G09F009-00; H04N005-72

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38, 74

ST colorless antireflective material adhesive layer contg; photocurable adhesive bonded antireflective material; electronic display antireflective material visibility improvement

IT Adhesives

Antireflective films

(colorless and hard antireflective materials with good scratch resistance and antireflection effects for displays)

IT 372967-41-4P 372967-42-5P

(adhesive layers; colorless and hard antireflective materials with good scratch resistance and antireflection effects for displays)

IT 374063-41-9, DeSolite Z 7521

(adhesive layers; colorless and hard antireflective materials with good scratch resistance and antireflection effects for displays)

IT 194877-44-6P 372967-44-7P

(low-n layers; colorless and hard antireflective materials with good scratch resistance and antireflection effects for displays)

effects for displays)

L30 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2000:706480 HCAPLUS
 DOCUMENT NUMBER: 133:288603
 TITLE: Antireflection film and its
 production method
 INVENTOR(S): Amimori, Ichiro; Nakamura, Kazuhiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000275401	A2	20001006	JP 1999-76489	1999 0319

PRIORITY APPLN. INFO.: <-- JP 1999-76489
 1999
 0319

AB The invention refers to an antireflection film and comprising a substrate, a undercoating layer, a hard coat layer and a low n layer wherein the low n layer has an average roughness of 0.05 - 2 μ m, and an n lower than that of the substrate and is a coated layer, and the undercoating layer is a polymer with > 10% weight of alc. or phenol monoacrylate ester or a methacrylate ester in order to create a coated antireflection film with properties comparable to that of a deposited film.

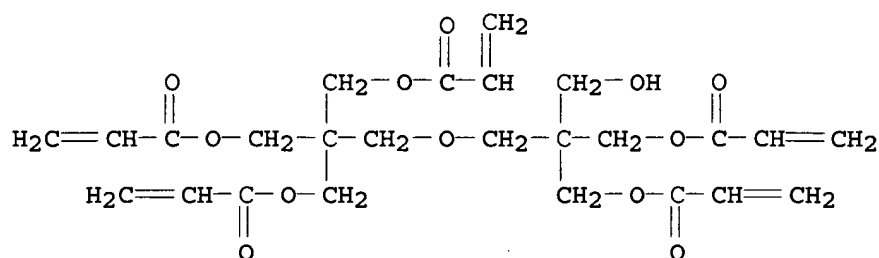
IT 82277-45-0
 (antireflection film and production method)

RN 82277-45-0 HCAPLUS

CN 2-Propenoic acid, 2-[[[3-hydroxy-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

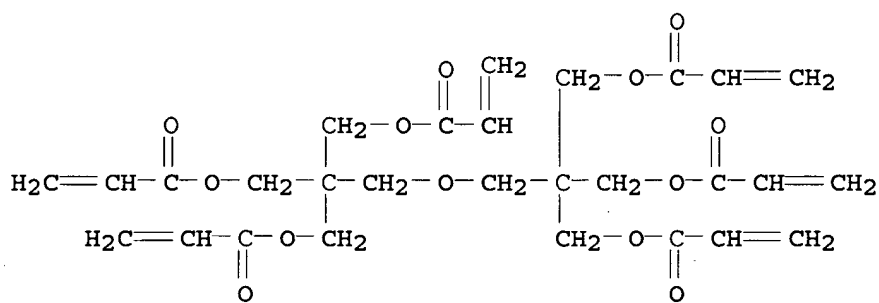
CRN 60506-81-2
 CMF C25 H32 O12



CM 2

CRN 29570-58-9

CMF C28 H34 O13



IC ICM G02B001-11

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST antireflection film coating

IT Antireflective films

Coating materials

(antireflection film and production method)

IT 78-93-3, Methyl ethyl ketone, uses 1310-58-3, Potassium hydroxide, uses 2439-35-2, 2530-85-0, KBM-503 7727-21-1, Potassium persulfate 9012-09-3, Triacetyl cellulose 13463-67-7, Titania, uses 25135-39-1 71868-10-5, Irgacure 907 82277-45-0 82799-44-8, Kayacure DETX 94099-99-7 94100-00-2

(antireflection film and production method)

IT 577-11-7, Sodium dioctyl sulfosuccinate

(antireflection film and production method)

L30 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:142417 HCAPLUS

DOCUMENT NUMBER: 130:229809

TITLE: Fluorine-containing monomer composition containing inorganic compound microparticles, low-refractive index material, and antireflection film

INVENTOR(S): Yoshida, Tatsuo; Kimura, Yasuhiro; Watanabe, Kenji; Ikeda, Tomoyuki; Ito, Tetsuya; Goto, Yoshitaka

PATENT ASSIGNEE(S): Nippon Oil and Fats Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11060637	A2	19990302	JP 1997-224882	1997 0821
JP 3724132	B2	20051207	JP 1997-224882	1997 0821

AB The **composition** contains inorg. compound microparticles and monomers containing 5-100% R1OCH2C(OR2)HRC(OR4)HCH2OR3 (R1-4 = H, (meth)acryloyl, R1 and/or R2 and R3 and/or R4 are (meth)acryloyl; R = C2-12 fluoroalkylene containing ≥2 F). The **compn** is cured to give the title material having reflective index ≤1.49. The **film** comprising a transparent substrate and the material **layer** is also claimed. The **film** has high surface hardness, scratch resistance, and adhesion strength to a substrate.

IT 220857-32-9P 220857-60-3P
 (low-refractive index material for antireflection **film** obtained by curing of **composition** containing F-containing monomers and inorg. compound microparticles)

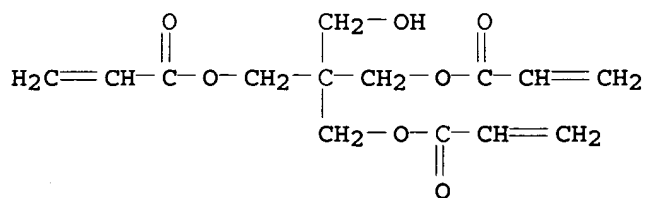
RN 220857-32-9 HCAPLUS

CN 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 4,4,5,5,6,6,7,7-octafluoro-1,2,9,10-decanetetrol 1,9(1,10 or 2,9)-di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3524-68-3

CMF C14 H18 O7



CM 2

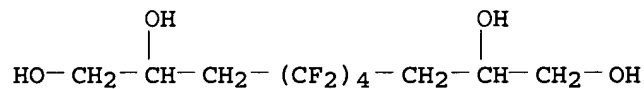
CRN 194930-69-3

CMF C16 H18 F8 O6

CCI IDS

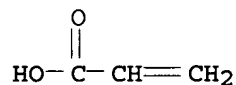
CM 3

CRN 194930-68-2
 CMF C10 H14 F8 O4



CM 4

CRN 79-10-7
 CMF C3 H4 O2

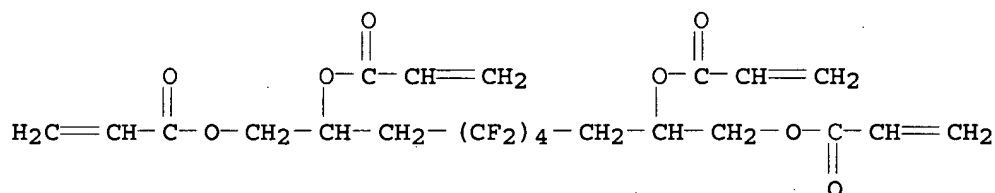


RN 220857-60-3 HCAPLUS

CN 2-Propenoic acid, 4,4,5,5,6,6,7,7-octafluoro-1,2,9,10-decanetetrayl ester, polymer with 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

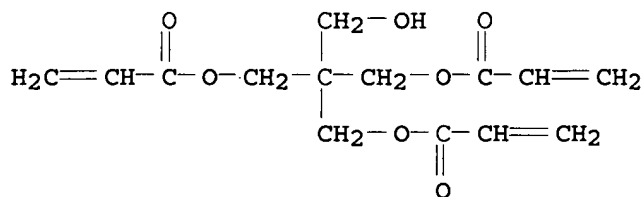
CM 1

CRN 194877-44-6
 CMF C22 H22 F8 O8



CM 2

CRN 3524-68-3
 CMF C14 H18 O7



- IC ICM C08F020-22
ICS B32B007-02; B32B027-30; C08K003-00; C08L033-16; G02B001-11;
B05D007-24
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and
Other Related Properties)
Section cross-reference(s): 35, 38
- ST fluorine monomer inorg particle **compn** cured;
antireflection **film** fluoropolymer silica microparticle
hardness; scratch resistant antireflection **film** acrylic
fluoropolymer
- IT Silica gel, uses
(XBA-ST, particles; low-refractive index material for
antireflection **film** obtained by curing of
composition containing F-containing monomers and inorg. compound
microparticles)
- IT Fluoropolymers, uses
(acrylic; low-refractive index material for antireflection
film obtained by curing of **composition** containing
F-containing monomers and inorg. compound microparticles)
- IT Antireflective **films**
(low-refractive index material for antireflection **film**
obtained by curing of **composition** containing F-containing monomers
and inorg. compound microparticles)
- IT 4369-14-6, KBM 5103
(coupling agent for silica particles; low-refractive index
material for antireflection **film** obtained by curing
of **composition** containing F-containing monomers and inorg. compound
microparticles)
- IT 194877-48-0P 195008-58-3P 220857-29-4P 220857-32-9P
220857-36-3P 220857-45-4P 220857-49-8P 220857-55-6P
220857-56-7P 220857-57-8P 220857-58-9P 220857-60-3P
220857-61-4P 220857-62-5P 220857-63-6P
(low-refractive index material for antireflection **film**
obtained by curing of **composition** containing F-containing monomers
and inorg. compound microparticles)
- IT 79-10-7, 2-Propenoic acid, reactions 814-68-6, Acryloyl chloride
194930-65-9 194930-68-2
(monomer from; low-refractive index material for antireflection
film obtained by curing of **composition** containing
F-containing monomers and inorg. compound microparticles)
- IT 194877-38-8P 194877-39-9P 194877-40-2P 194877-41-3P
194877-44-6P 194877-53-7P 194930-66-0P 194930-69-3P
219944-77-1P
(monomer; low-refractive index material for antireflection
film obtained by curing of **composition** containing
F-containing monomers and inorg. compound microparticles)
- IT 4986-89-4, Tetramethylolmethane tetraacrylate 220857-48-7
(monomer; low-refractive index material for antireflection
film obtained by curing of **composition** containing
F-containing monomers and inorg. compound microparticles)
- IT 221158-07-2, MFS 10P
(particles; low-refractive index material for antireflection
film obtained by curing of **composition** containing
F-containing monomers and inorg. compound microparticles)

L30 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:352667 HCAPLUS

DOCUMENT NUMBER: 129:87802

TITLE: Organic electroluminescent devices having
transparent photocurable resin substrates and

INVENTOR(S): production method thereof
 Tanamura, Mitsuru; Hayakawa, Seiichiro;
 Karasawa, Tamae
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 10144469	A2	19980529	JP 1997-244964	1997 0910

PRIORITY APPLN. INFO.: <-- JP 1996-242054 A 1996
 0912

AB Title devices comprise anodes, organic light-emitting layers, and cathodes laminated on one side of substrates and the substrates comprise photocurable resins, preferably obtained from monomers having ≥ 2 (meth)acrylate groups, and have surface roughness 1-50 nm. Thus, a monomer composition comprising p-bis(β -methacryloyloxyethylthio)xylylene 99, pentaerythritol tetrakis(β -thiopropionate) 1, Lucirin TPO (photoinitiator) 0.05, and benzophenone (photoinitiator) 0.02 parts was cured by UV to give a transparent cured product having surface roughness 12.4 nm, refractive index 1.60, drop impact resistance 40 cm, and flexural modulus 260 kg/mm². An organic electroluminescent device was prepared using the cured product as substrate and gave good luminescence properties.

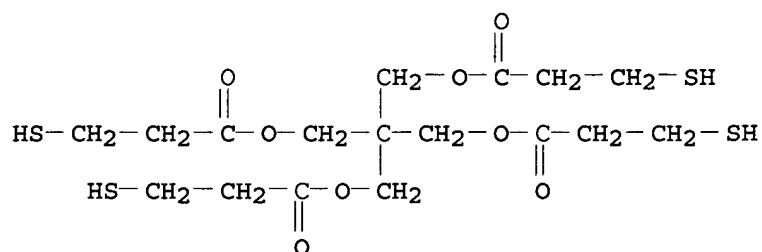
IT 209157-79-9P, p-Bis(β -methacryloyloxyethylthio)xylylene-pentaerythritol tetrakis(β -thiopropionate) telomer 209157-80-2P
 (preparation of organic electroluminescent devices having transparent photocurable resins as substrates)

RN 209157-79-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,4-phenylenebis(methylenethio-2,1-ethanediyl) ester, telomer with 2,2-bis[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl bis(3-mercaptopropanoate) (9CI)
 (CA INDEX NAME)

CM 1

CRN 7575-23-7
 CMF C17 H28 O8 S4



CM 2

CRN 112503-99-8

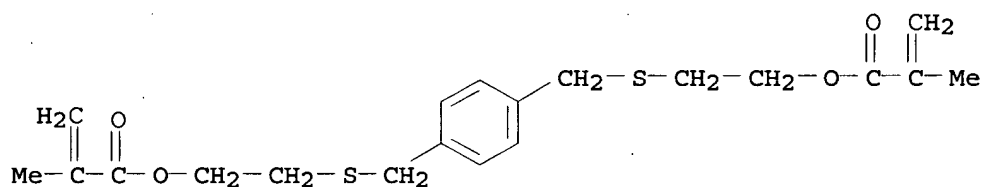
CMF (C20 H26 O4 S2)x

CCI PMS

CM 3

CRN 112503-98-7

CMF C20 H26 O4 S2



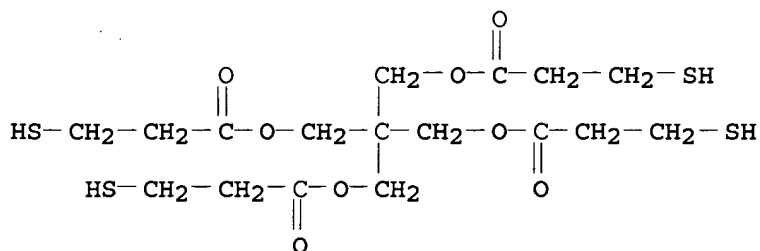
RN 209157-80-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, telomer with 2,2-bis[(3-mercapto-1-oxopropoxy)methyl]-1,3-propanediyl bis(3-mercaptopropanoate) (9CI)
 (CA INDEX NAME)

CM 1

CRN 7575-23-7

CMF C17 H28 O8 S4

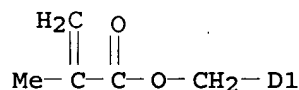
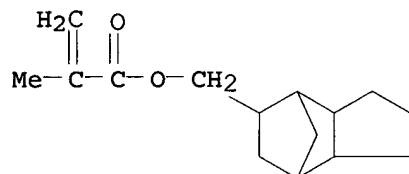


CM 2

CRN 68812-81-7
 CMF (C20 H28 O4)x
 CCI PMS

CM 3

CRN 43048-08-4
 CMF C20 H28 O4
 CCI IDS



IC ICM H05B033-02
 ICS C08F020-38; H05B033-10
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and
 Other Related Properties)
 IT 209157-79-9P, p-Bis(β-methacryloyloxyethylthio)xylylene-pentaerythritol tetrakis(β-thiopropionate) telomer
 209157-80-2P
 (preparation of organic electroluminescent devices having transparent
 photocurable resins as substrates)

L30 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1997:195571 HCAPLUS
 DOCUMENT NUMBER: 126:192757
 TITLE: Optical multilayer film
 INVENTOR(S): Nakayama, Yasushi; Matsuo, Ryuichi
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09021902	A2	19970121	JP 1995-170860	1995 0706

PRIORITY APPLN. INFO.:

<--
 JP 1995-170860

1995
0706

<--

AB The invention relates to an optical **multilayer film**, comprising a **multilayer** structure of a high n **layer** alternately stacked with a low n **layer**, wherein the high n **layer** is prepared from metal alkoxyde(s), where the metal is selected from Ti, Zr, Ta, and In, and a composition consisting mainly of compds. containing ≥ 2 groups selected from (meth)acryloyl, allyl, and vinyl groups. The optical **multilayer film** produced has enhanced adhesion to a plastic substate.

IT 88583-06-6 187604-90-6

(optical **multilayer film**)

RN 88583-06-6 HCAPLUS

CN 2-Propenoic acid, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol], homopolymer (9CI) (CA INDEX NAME)

CM 1

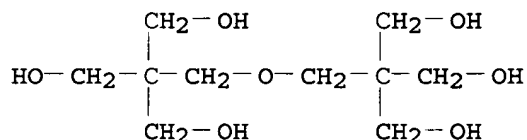
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CMF C10 H22 O7 . x C3 H4 O2

CM 2

CRN 126-58-9

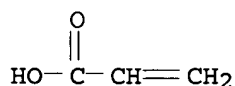
CMF C10 H22 O7



CM 3

CRN 79-10-7

CMF C3 H4 O2



RN 187604-90-6 HCAPLUS

CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

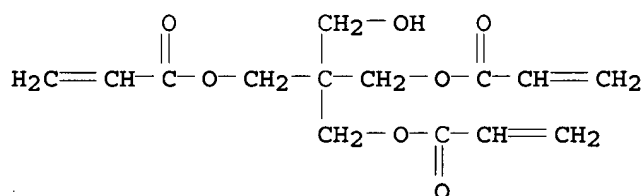
CM 1

CRN 93294-97-4

CMF C64 H94 O25

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 \text{H}_2\text{C}=\text{CH}-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-\text{O}-(\text{CH}_2)_5-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\overset{\overset{\text{O}}{\parallel}}{\text{C}} \\
 \text{H}_2\text{C}=\text{CH}-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-\text{O}-(\text{CH}_2)_5-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-\text{O}-\text{CH}_2 \\
 \text{CH}_2-\text{O}-\overset{\overset{\text{O}}{\parallel}}{\text{C}}- \\
 \text{CH}_2-\text{O}-\overset{\overset{\text{O}}{\parallel}}{\text{C}}-
 \end{array}$$
$$\begin{array}{c} \text{O} \\ || \\ -(\text{CH}_2)_5-\text{O}-\text{C}-\text{CH}=\text{CH}_2 \\ \\ \text{O} \\ || \\ -(\text{CH}_2)_5-\text{O}-\text{C}-\text{CH}=\text{CH}_2 \\ \\ \text{O} \\ || \\ -(\text{CH}_2)_5-\text{O}-\text{C}-\text{CH}=\text{CH}_2 \\ | \\ \text{O} \end{array}$$

CRN 3524-68-3
CMF C14 H18 O7



```

IC      ICM  G02B001-11
CC      73-11 (Optical, Electron, and Mass Spectroscopy and
        Other Related Properties)
ST      optical multilayer film metal alkoxyde coating
IT      Coating process
        Optical materials
        (optical multilayer film)
IT      1314-23-4, Zirconium oxide, uses      13463-67-7, Titanium oxide
        (tio2), uses
        (optical multilayer film)
IT      88583-06-6      110036-79-8 187604-90-6
        (optical multilayer film)

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USHA SHRESTHA EIC 1700 REM 4B28

DOCUMENT NUMBER: 125:208023
 TITLE: Photopolymerizable **composition** for a color filter
 INVENTOR(S): Urano, Toshiyuki; Ikeda, Shingo; Hino, Etsuko; Kawana, Shin; Ohmori, Takeshi; Mori, Koji
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan
 SOURCE: Eur. Pat. Appl., 40 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: **Patent**
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 723167	A2	19960724	EP 1996-100497	1996 0115
EP 723167	A3	19970402	<--	
R: DE, FR, GB, NL				
JP 09033715	A2	19970207	JP 1995-183898	1995 0720
JP 09105810	A2	19970422	JP 1996-6090	1996 0117
JP 3633073	B2	20050330	<--	
US 5863678	A	19990126	US 1996-587483	1996 0117
JP 09096719	A2	19970408	JP 1996-102474	1996 0424
JP 09105812	A2	19970422	JP 1996-102475	1996 0424
JP 3641876	B2	20050427	<--	
PRIORITY APPLN. INFO.:			JP 1995-4899	A 1995 0117
			JP 1995-183898	A 1995 0720
			JP 1995-190656	A 1995 0726
			JP 1995-200789	A 1995 0807
			<--	

AB Photopolymerizable **compns.** for color filters comprise a compound having at least one ethylenically unsatd. double bond, a photopolymn. initiator, and a red, green or blue colorant and which, when formed into a coating film having a dried film thickness of at most 1 μ m, has an optical d. of at least 1.1. The **compns.** may also include polymer binders.

IT 92488-37-4P 181224-74-8P 181224-75-9P
(photopolymerizable **compns.** for color filters)

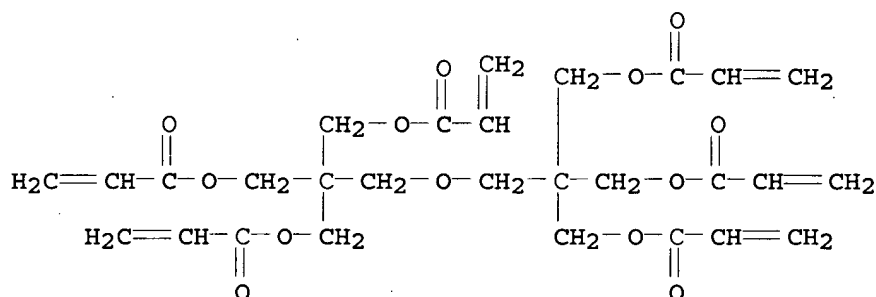
RN 92488-37-4 HCAPLUS

CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl]di-2-propenoate (9CI) (CA INDEX NAME)

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CRN 29570-58-9

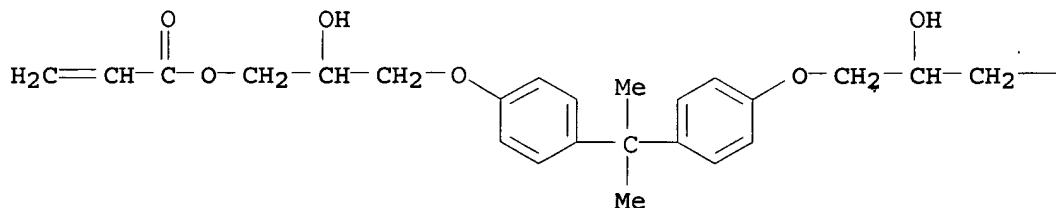
CMF C28 H34 O13



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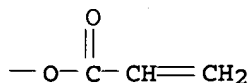
CRN 4687-94-9

CMF C27 H32 O8



PAGE 1-A

PAGE 1-B



RN 181224-74-8 HCAPLUS
 CN 2-Propenoic acid, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with SP 2500 (epoxy resin) (9CI) (CA INDEX NAME)

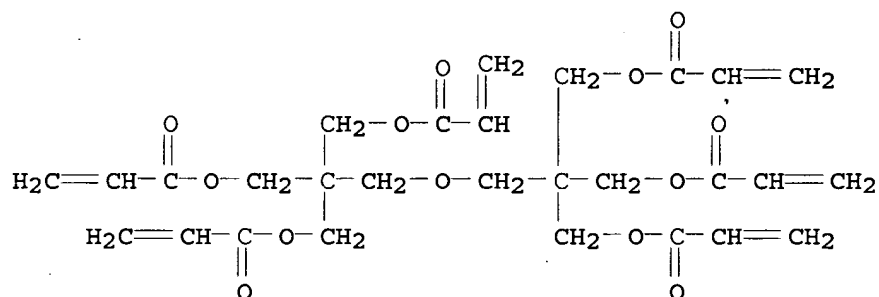
CM 1

CRN 105287-63-6
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

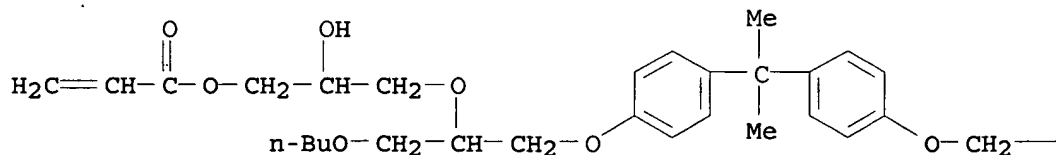
CRN 29570-58-9
 CMF C28 H34 O13



RN 181224-75-9 HCAPLUS
 CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)-2,1-ethanediyl]oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

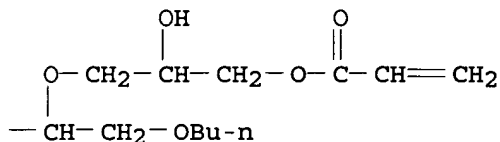
CM 1

CRN 152796-43-5
 CMF C41 H60 O12



PAGE 1-A

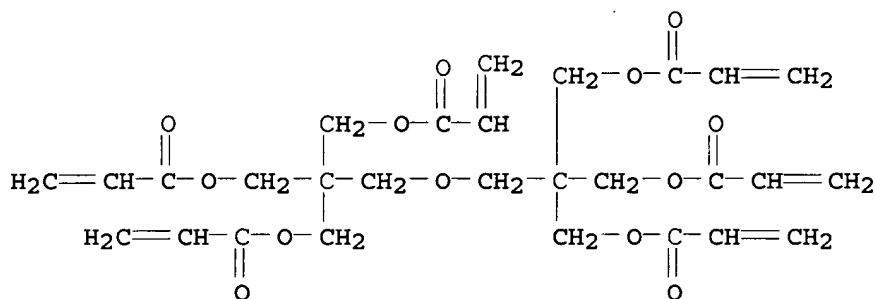
PAGE 1-B



CM 2

CRN 29570-58-9

CMF C28 H34 O13



- IC ICM G02B001-04
ICS G02B005-20
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and
Other Related Properties)
Section cross-reference(s): 38, 74
- ST photopolymerizable compn color filter
- IT Optical filters
(photopolymerizable compns. for color filters)
- IT Carbon black, uses
(photopolymerizable compns. for color filters)
- IT 4687-94-9, SP-1509
(SP 1509; photopolymerizable compns. for color
filters)
- IT 90-93-7 90-94-8, Michler's ketone 91-44-1 147-14-8, Lionol
Blue ES 149-30-4, 2-Mercaptobenzthiazole 583-39-1 2382-96-9,
2(3H)-Benzoxazolethione 4378-61-4, Lionogen Red GD 6143-80-2
10287-53-3, Ethyl p-dimethylaminobenzoate 10287-54-4, Ethyl
p-diethylaminobenzoate 14302-13-7, Lionol Green 2YS
15625-89-5, Trimethylolpropane triacrylate 25086-15-1
29570-58-9, Dipentaerythritol hexaacrylate 42573-57-9
52831-04-6 58293-56-4 62134-40-1 63619-32-9 65697-22-5
72102-92-2 79622-46-1 82799-44-8 105287-63-6, SP 2500
111476-00-7 120123-32-2 125051-32-3 152796-43-5
181224-35-1 181224-39-5 181224-45-3 181224-47-5
181224-51-1 181224-54-4 181224-58-8
(photopolymerizable compns. for color filters)
- IT 67653-78-5P, Dipentaerythritol hexaacrylate homopolymer
92488-37-4P 181224-74-8P 181224-75-9P
181224-76-0P
(photopolymerizable compns. for color filters)

IT 872-50-4, uses 84540-57-8, PGMEA
(photopolymerizable **compns.** for color filters)

L30 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:408856 HCAPLUS

DOCUMENT NUMBER: 122:226385

TITLE: Thermochromic light-controlling composition
containing oriented liquid-crystal
light-controlling **layer**

INVENTOR(S): Kin, Tatsuichiro; Uchama, Akihiko; Igarashi,
Satoshi; Nakatani, Kenji

PATENT ASSIGNEE(S): Teijin Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: **Patent**

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06347741	A2	19941222	JP 1993-137448	1993 0608
JP 3270195	B2	20020402	<--	
PRIORITY APPLN. INFO.:			JP 1993-137448	1993 0608

AB The composition comprises two substrates, ≥ 1 of which is transparent, interposing a vertically oriented liquid crystal **layer** (to the substrates) containing 0.05-10 weight% P-type dichroic dye as a light-controlling **layer** in which the light transmittance is controlled by changing its temperature. The substrates may be coated with oriented **films** consisting of a polymer obtained by polymerization of a solution mainly containing $\text{CH}_3\text{:CR}_1\text{CO(OR}_2\text{)nOR}_3$ [sic] ($\text{R}_1 = \text{H, Me; R}_2 = \text{C}_2\text{-3 alkylene; R}_3 = \text{C}_7\text{-20 alkyl(-substituted benzene); n = 0-2}$) such as nonylphenoxypolyethylene glycol acrylate. Absorbing wavelength can be controlled by the composition

IT 161496-35-1P
(oriented **film**; thermochromic light-controlling
composition containing oriented liquid-crystal light-controlling
layer)

RN 161496-35-1 HCAPLUS

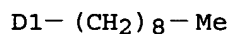
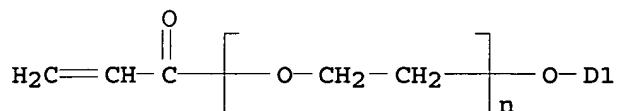
CN 2-Propenoic acid, 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α -(1-oxo-2-propenyl)- ω -(nonylphenoxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

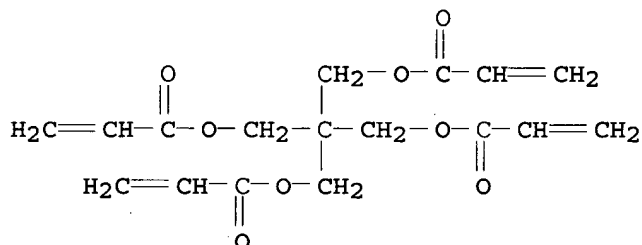
CRN 50974-47-5

CMF (C2 H4 O) $_n$ C18 H26 O2

CCI IDS, PMS



CRN 4986-89-4
CMF C17 H20 O8



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IC      ICM      G02F001-13
        ICS      G02F001-13; G02F001-133; G02F001-1337
CC      73-11 (Optical, Electron, and Mass Spectroscopy and
        Other Related Properties)
        Section cross-reference(s): 75
ST      thermochromism light controlling liq crystal orientation; oriented
        film liq crystal light controlling
IT      Liquid crystals
        Thermochromism
            (thermochromic light-controlling composition containing oriented
            liquid-crystal light-controlling layer)
IT      119371-26-5, M 483      161936-87-4, S 416
        (dye containing in light-controlling layer; thermochromic
        light-controlling composition containing oriented liquid-crystal
        light-controlling layer)
IT      63748-28-7
        (light-controlling layer; thermochromic
        light-controlling composition containing oriented liquid-crystal
        light-controlling layer)
IT      161496-35-1P
        (oriented film; thermochromic light-controlling
        composition containing oriented liquid-crystal light-controlling
        layer)

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